

Fig. 1

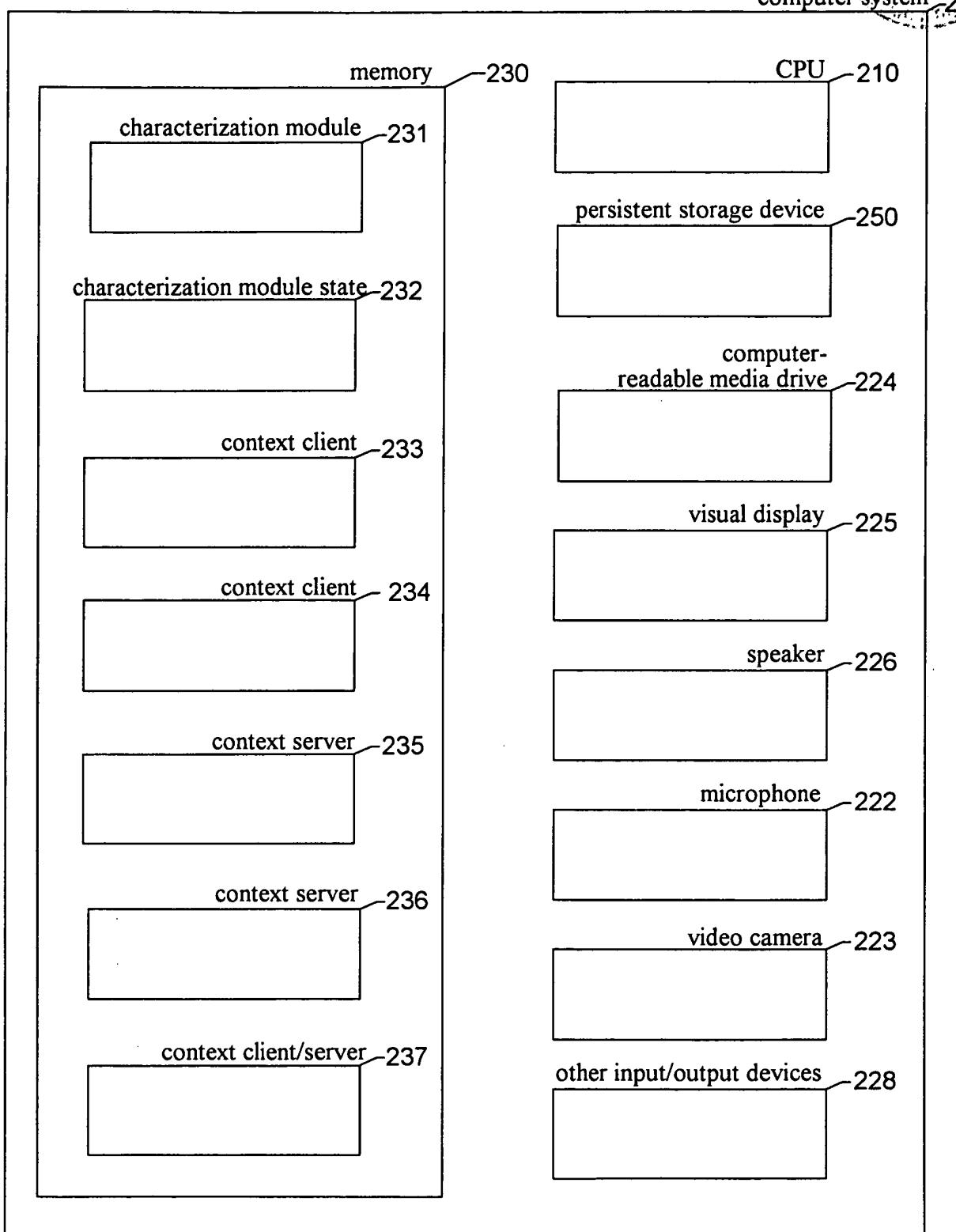


Fig. 2

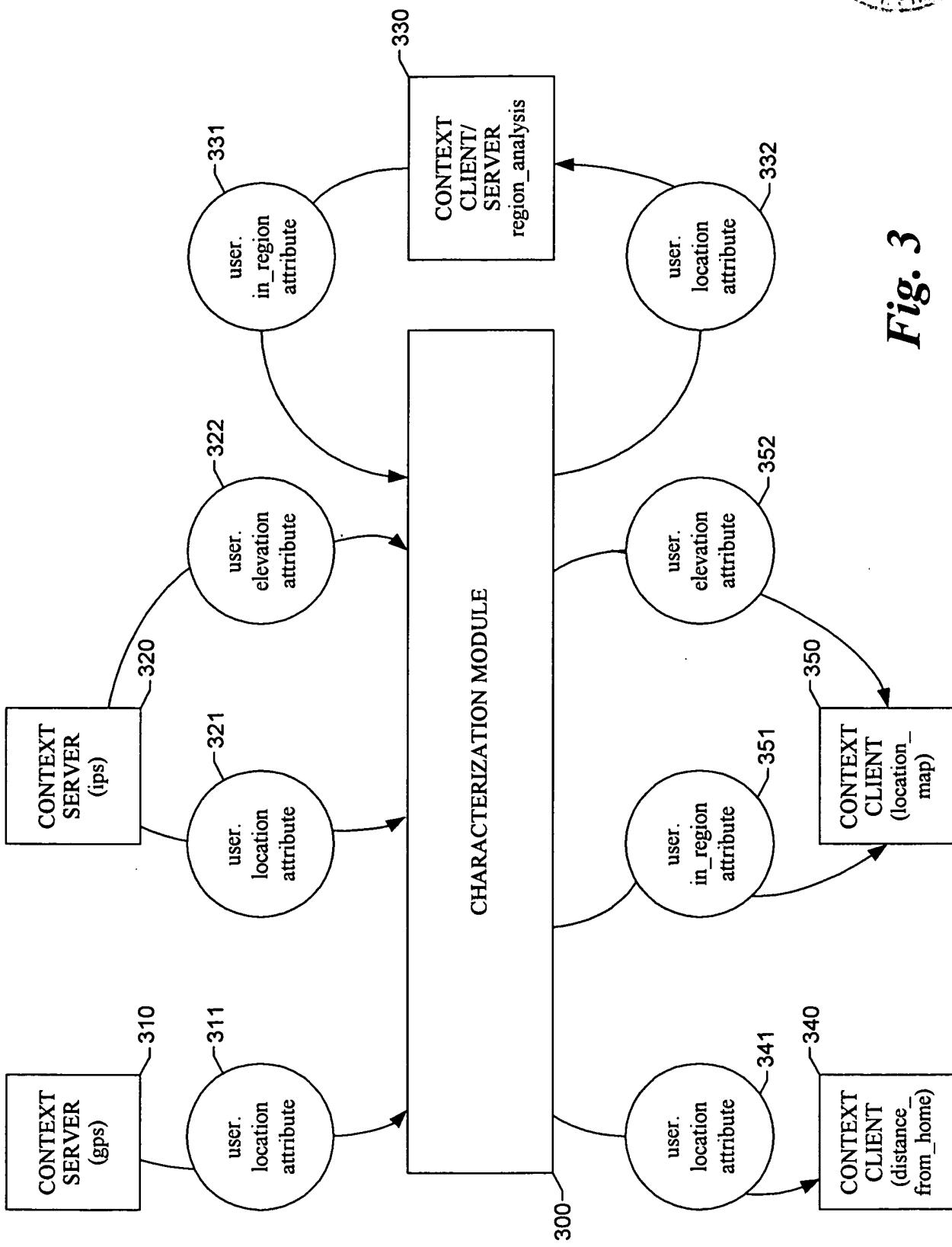


Fig. 3

context server table				
	context server name	version	installation date	filename
401	gps	1	2/10/2000	gps.exe
402	ips	1	2/21/2000	ips.exe
403	location_region_analysis	1	2/10/2000	l_r_a.exe

Fig. 4

attribute instance table				
	attribute name	context server name	value	uncertainty
501	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09' 2/22/2000
502	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021' 2/22/2000
503	user.elevation	ips	22	.5
504	user.in_region	location_region_analysis	none	none none

Fig. 5

600	context client name		message handler
601	location_map	(reference)	
602	distance_from_home	(reference)	
603	region_analysis	(reference)	

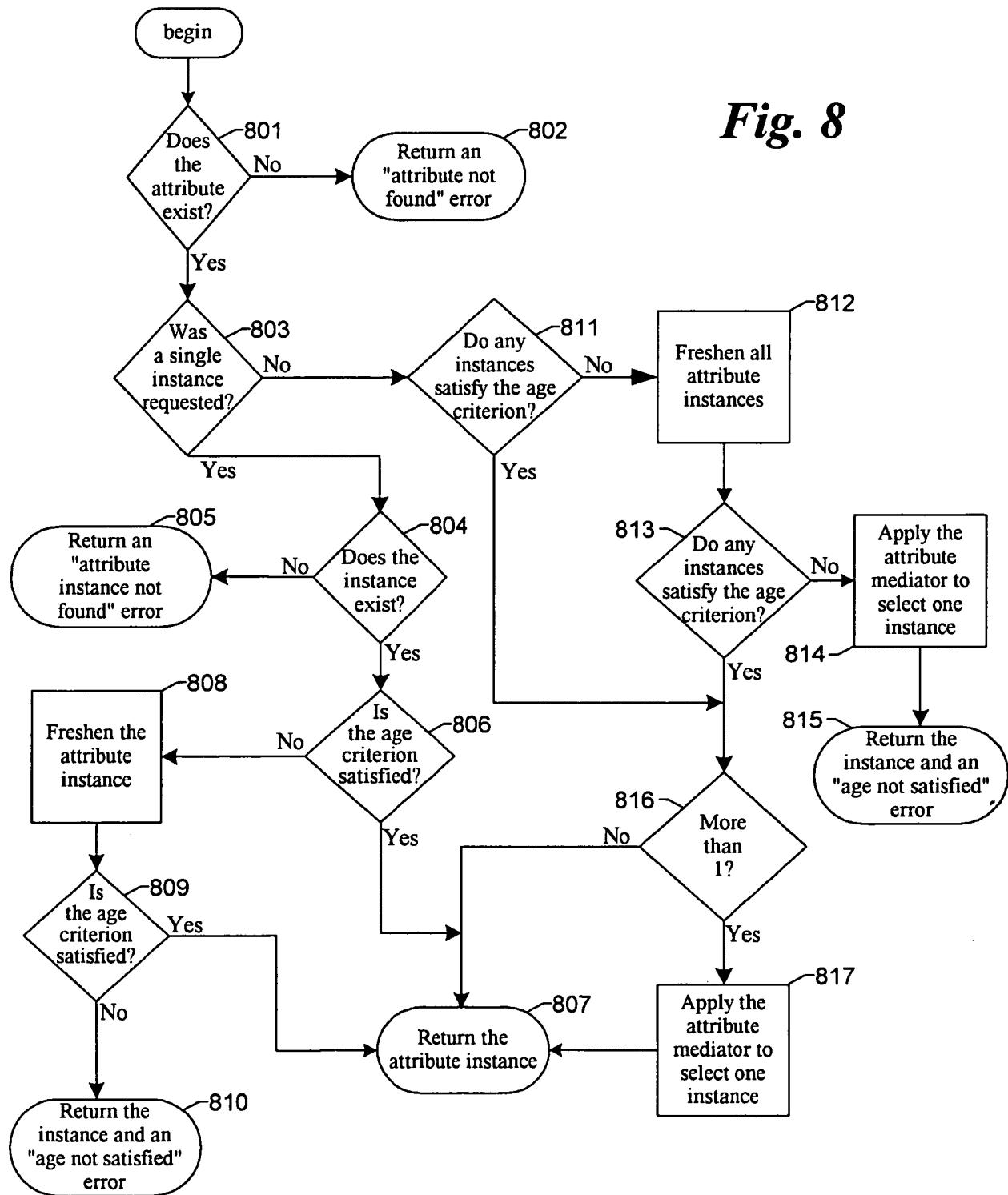
Fig. 6

attribute instance table					
	attribute name	context server name	value	uncertainty	timestamp
701	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000
702	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000
703	user.elevation	ips	22	.5	13:11:01.118 2/22/2000
704	user.in_region	location_region_analysis	none	none	none

Fig. 7

Fig. 8

TODAY'S DATE: 07/06/00



attribute instance table						
attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
user.in_region	region_analysis	none	none	none	none	1

Fig. 9

condition table					
condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
in_region_true	region_analysis	user.in_region	none	TRUE	=

Fig. 10

condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
region_boundary_crossed	region_analysis	in_region_true	TRUE or FALSE	30	13:11:29.101 2/22/2000	(reference)	no
1101	1111	1112					
		1113					
			1114				
				1115			
					1116		
						1117	
							1118

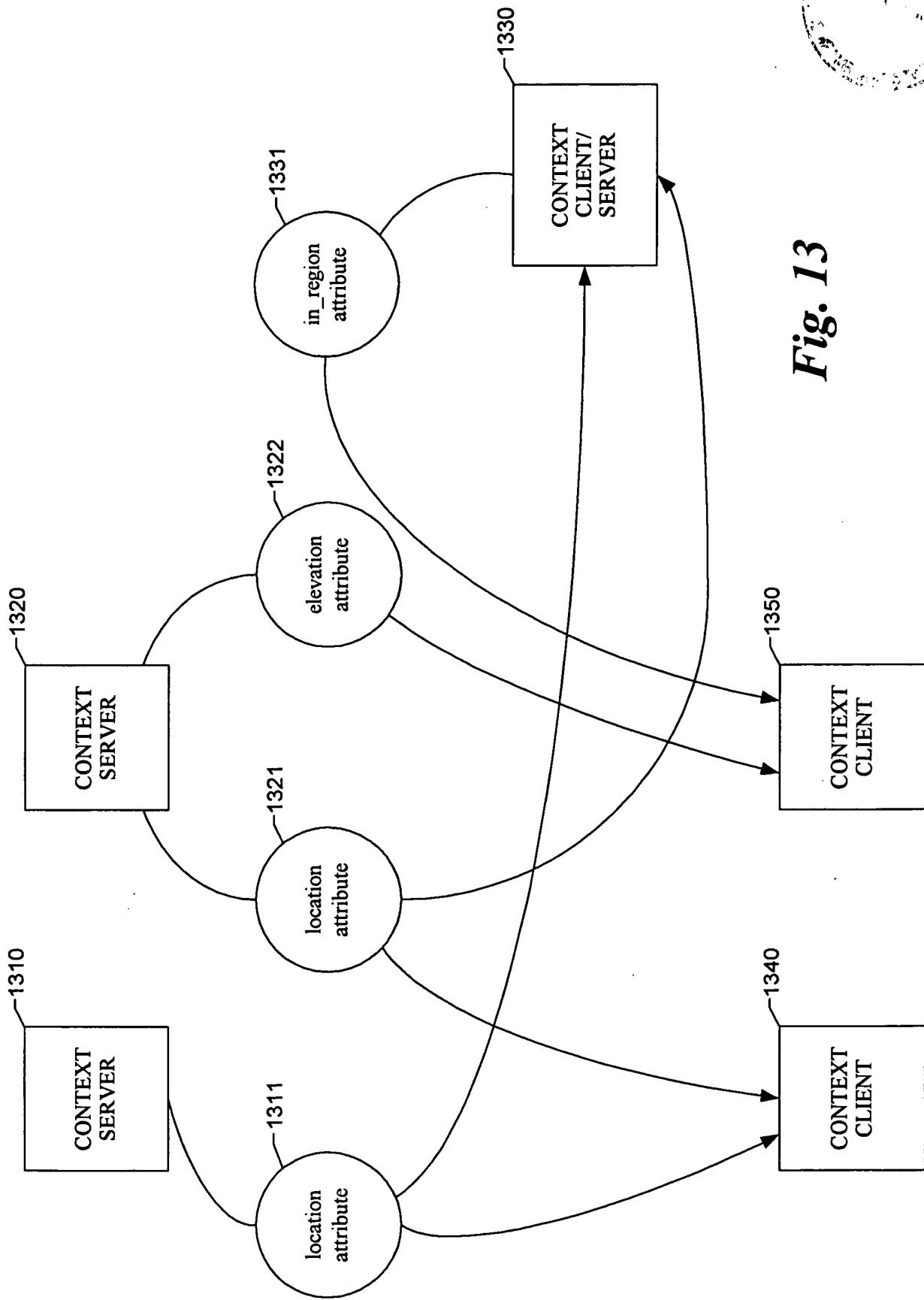
Fig. 11

condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
region_boundary_crossed	region_analysis	in_region_true	TRUE or FALSE	30	13:11:59.101 2/22/2000	(reference)	yes
1201	1211	1212					
		1213					
			1214				
				1215			
					1216		
						1217	
							1218

Fig. 12



Fig. 13





attribute request table		
	attribute name	context client name
1401	user.location	distance_from_home
1402	user.in_region	location_map
1403	user.location [gps]	location_region_analysis
1404	user.elevation	location_map

1411

1412

Fig. 14



User.

- Desired_privacy_level
- Interruptibility
- Speed
- Direction
- Acceleration
- Availability.
 - Cognitive_availability
 - Tactile_availability
 - Manual_availability
 - Visual_availability
 - Oral_availability
 - Auditory_availability
- Proximity.<Item or place name>
- Mood.
 - Happiness
 - Sadness
 - Anger
 - Frustration
 - Confusion
- Activity.
 - Driving
 - Eating
 - Running
 - Sleeping
 - Talking
 - Typing
 - Walking
- Location.
 - Place_name
 - Latitude
 - Longitude
 - Altitude
 - Room
 - Floor
 - Building
 - Address
 - Street
 - City
 - County
 - State
 - Country
 - Postal_Code
- Destination. (same as User.Location.)
- Physiology.
 - Pulse
 - Body_temperature
 - Blood_pressure
 - Respiration
- Person.<name or ID>. (same as User.)
- Platform.

UI.

- Oral_input_device_availability
- Manual_input_device_availability
- Tactile_output_device_availability
- Visual_output_device_availability
- Auditory_output_device_availability

Platform. (continued)

- CPU.
 - Load
 - Speed
- Memory.
 - Total_capacity
 - Used
- Storage.
 - Total_capacity
 - Used
- Connectivity.
 - Connection_status
 - Connection_speed
 - Connection_type/device
 - Connection_activity
- Power.
 - Power_source
 - Power_level
- Environment.

People.

- Nearest
- Number_present
- Number_close

Local.

- Time
- Date
- Temperature
- Pressure
- Wind_speed
- Wind_direction
- Absolute_humidity
- High_forecast_temperature
- Low_forecast_temperature
- People_present
- Ambient_noise_level
- Ambient_light_level
- Days.<previous or future>.
 - High_temperature
 - Low_temperature
 - Precipitation_type
 - Precipitation_amount
- Place.<place name>. (same as Environment.Local)

Application.

Mail.

- Available
- New_messages_waiting
- Messages_waiting_to_be_sent

Phone.

- Available
- In_use
- On/off
- Notification_mechanism
- Call_incoming
- Caller_ID

Sound_recorder.

- Available
- Recording

Fig. 16

1) User Setting

- a) Mental Context
 - i) Meaning
 - ii) Cognition
 - (1) Divided User Attention
 - (2) Task Switching
 - (3) Background Awareness
 - iii) Solitude
 - iv) Privacy
 - (1) Desired Privacy
 - (2) Perceived Privacy
- v) Social Context
- vi) Affect

b) Physical Situation

- i) Body
 - (1) Biometrics
 - (2) Posture
 - (3) Motion
 - (4) Physical Encumbrment
 - (a) Senses
 - (i) Eyes
 - (ii) Ears
 - (iii) Tactile
 - (iv) Hands
 - (v) Nose
 - (vi) Tongue
 - (b) Workload demands/effects
 - (c) Interaction with computer devices
 - (d) Interaction with people
 - (e) Physical Health
- ii) Environment
 - (1) Time/Space
 - (2) Objects
 - (3) Persons
 - (a) Audience/Privacy Availability
 - (i) Scope of Disclosure
 - (ii) Hardware affinity for privacy
 - (iii) Privacy Indicator for User
 - (iv) Privacy Indicator for Public
 - (v) Watching Indicator
 - (vi) Being Observed Indicator
 - (4) Ambient Interference
 - (a) Visual
 - (b) Audio
 - (c) Tactile

2) Computer

- a) Power
- b) Configuration
 - i) User Input Systems
 - (1) Hand/Haptic
 - (a) Keyboard/Keystrokes
 - (2) Voice/Audio
 - (3) Eye Tracking
 - (4) Cursors
 - (a) Axis
 - (b) Resolution
 - (i) Selection
 - (ii) Invocation
 - (c) Accelerators
 - ii) Output Systems
 - (1) Visual
 - (a) Resolution
 - (2) Audio
 - (a) Public/Private
 - (3) Haptic
- iii) External Resources
 - (1) I/O devices
 - (2) Connectivity
- c) Data
 - i) Quantity/State
 - ii) Urgency/Importance
 - (1) Use of Prominence
 - iii) Modality
 - iv) Sensitivity/Purpose
 - (1) Privacy Issues
 - (2) Use of Association
 - (3) Use of Safety
 - v) Source/Ownership
 - (1) Types
 - (a) User generated
 - (b) Other computers or people
 - (c) Sensor
 - (d) PC State
 - (2) Use of Association



Fig. 17

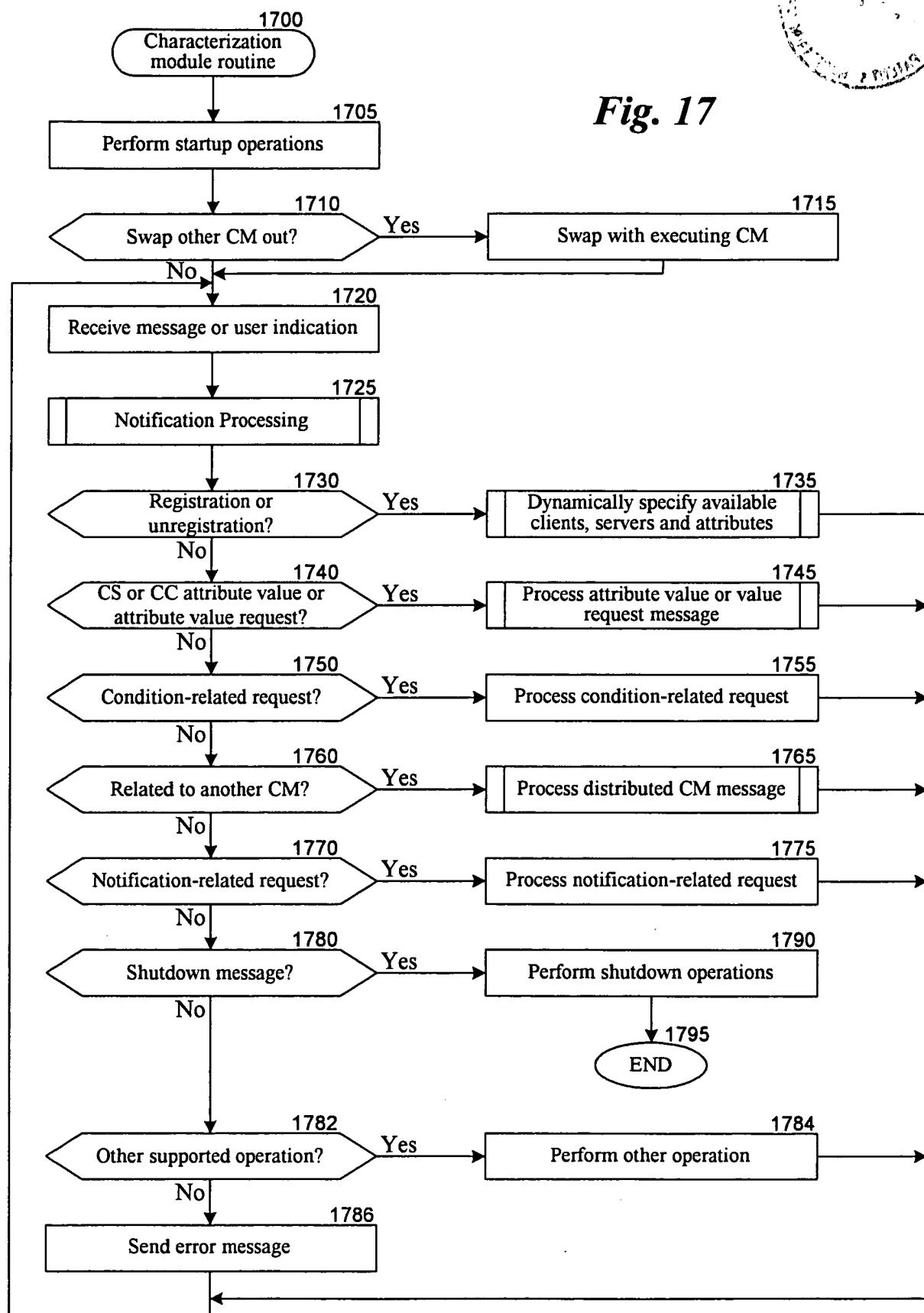




Fig. 18

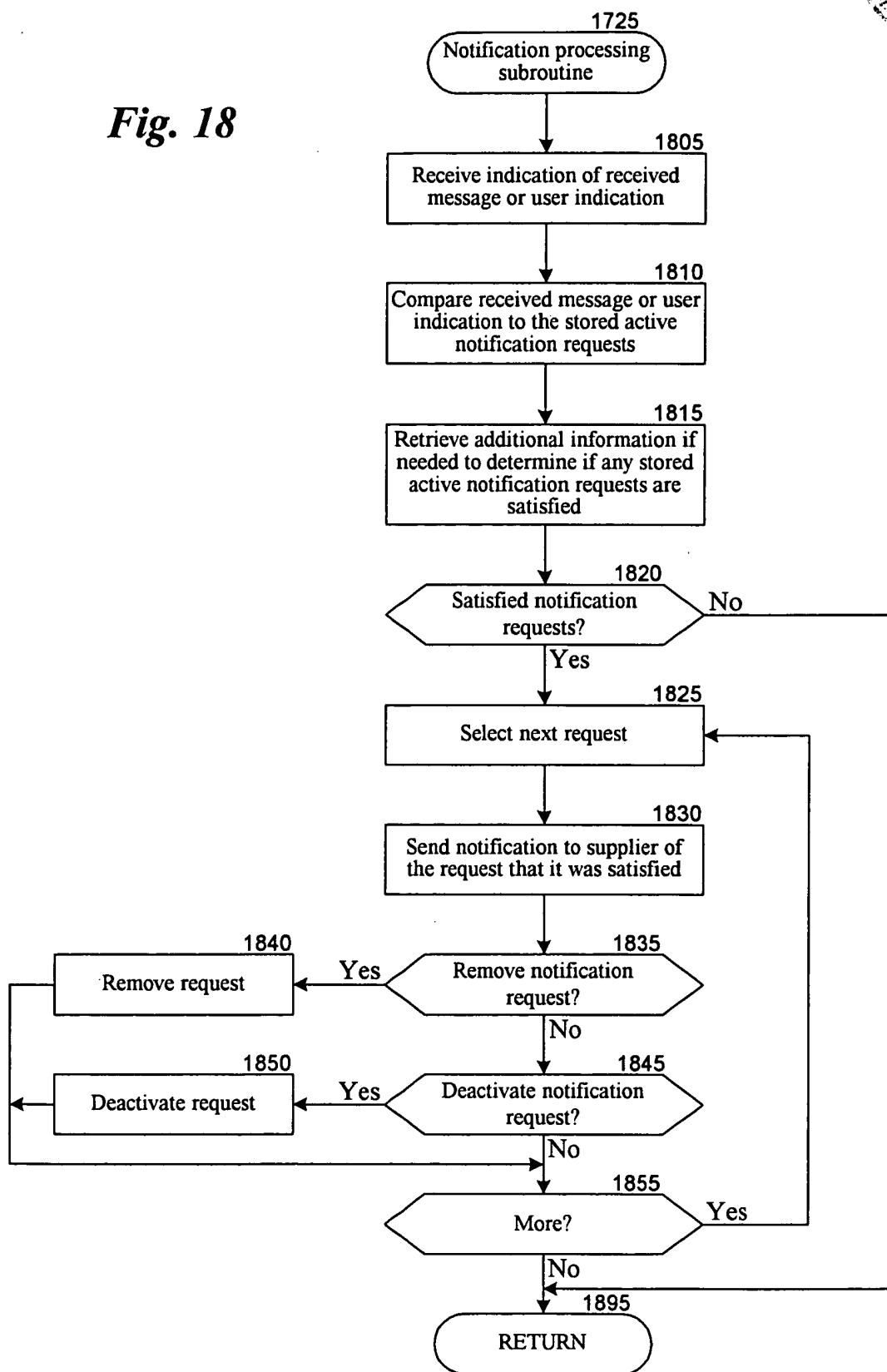


Fig. 19

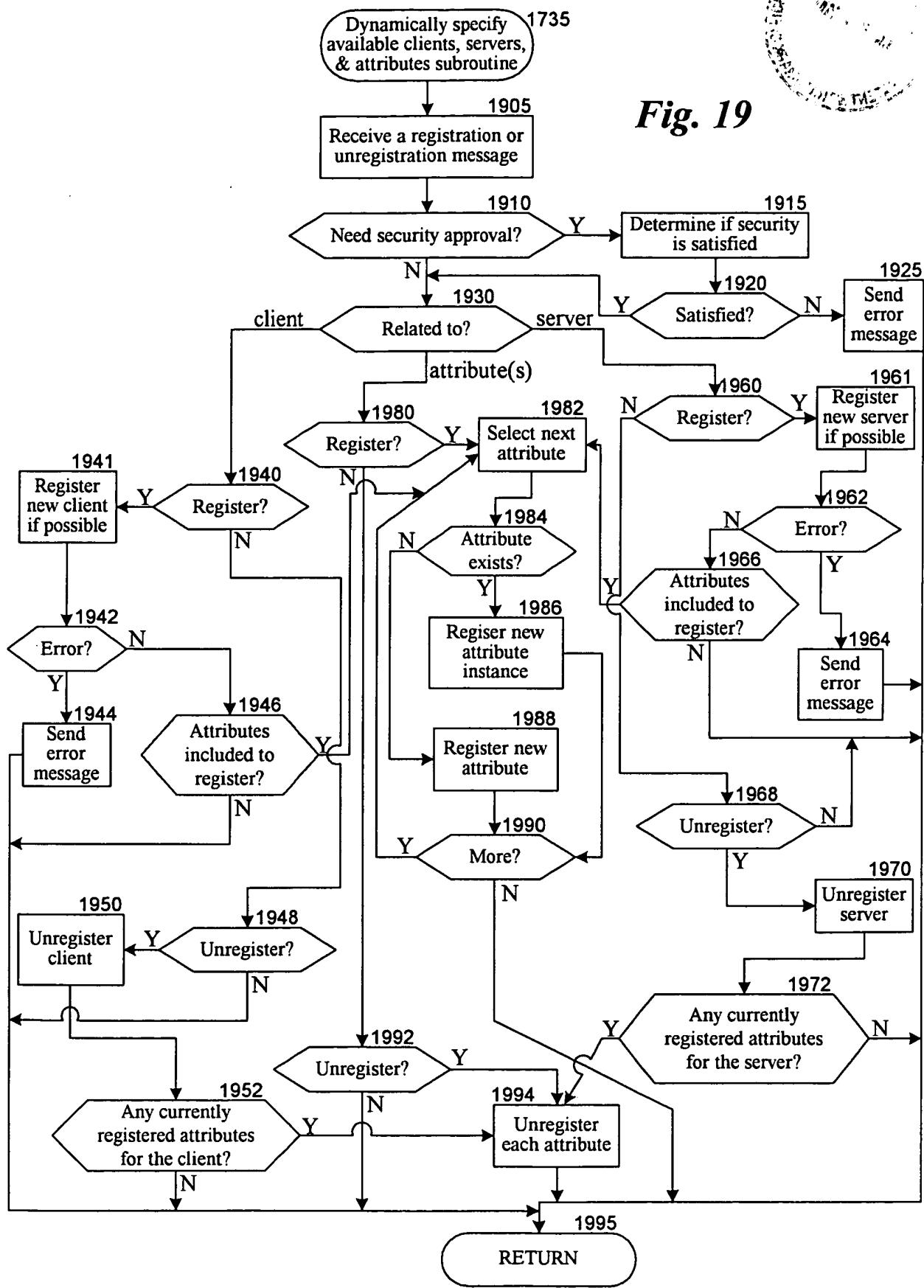


Fig. 20A

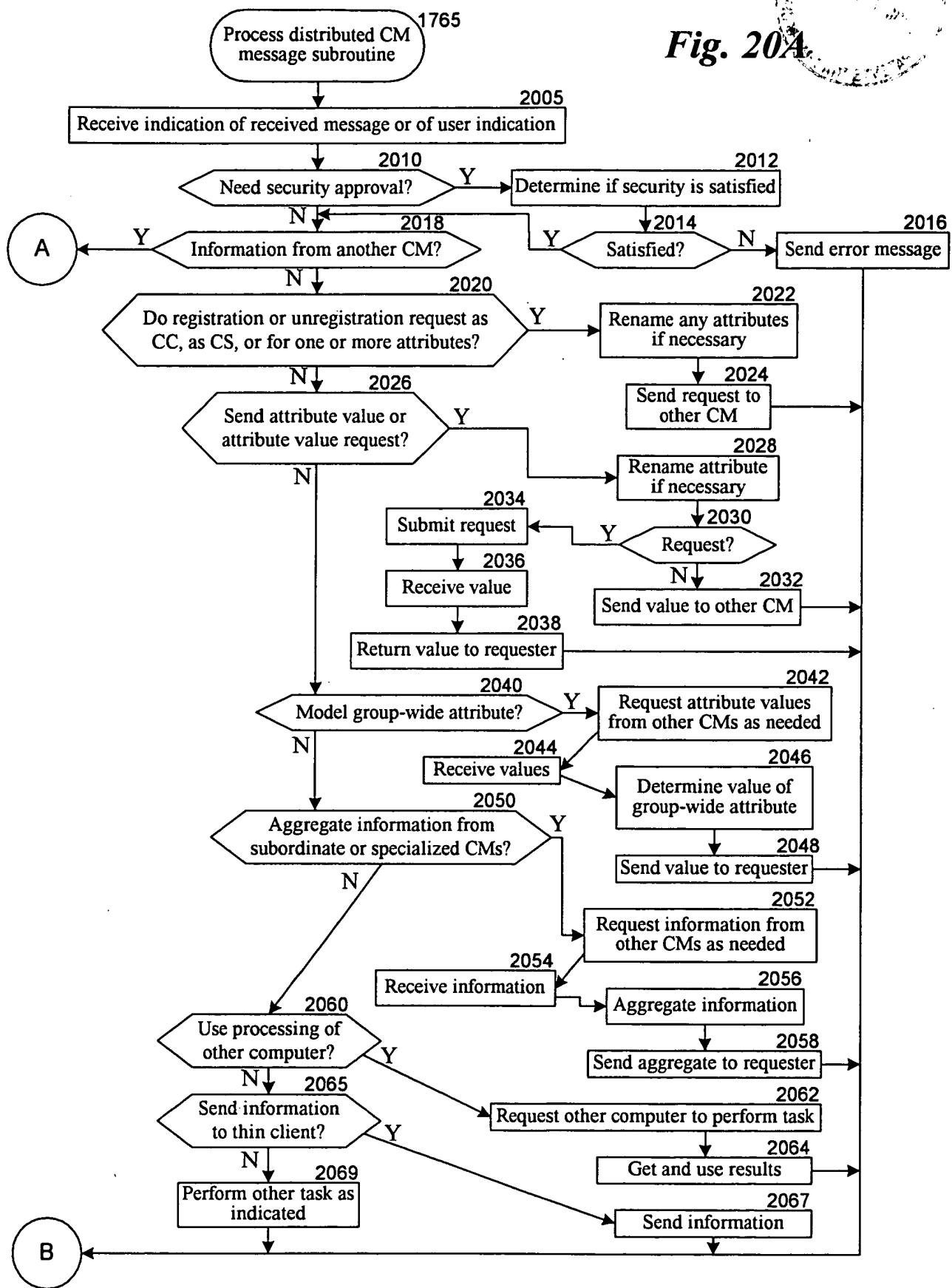


Fig. 20B

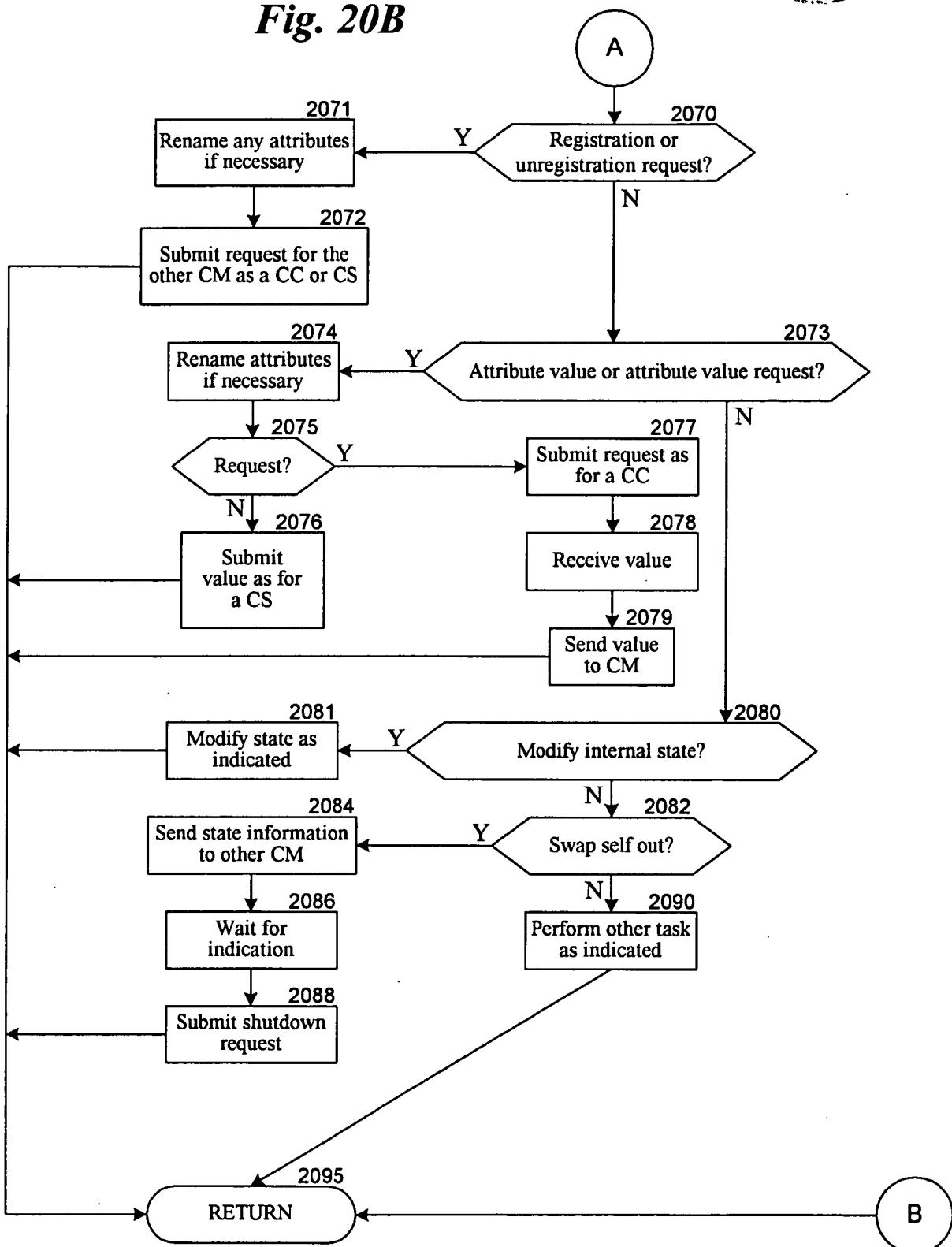


Fig. 21

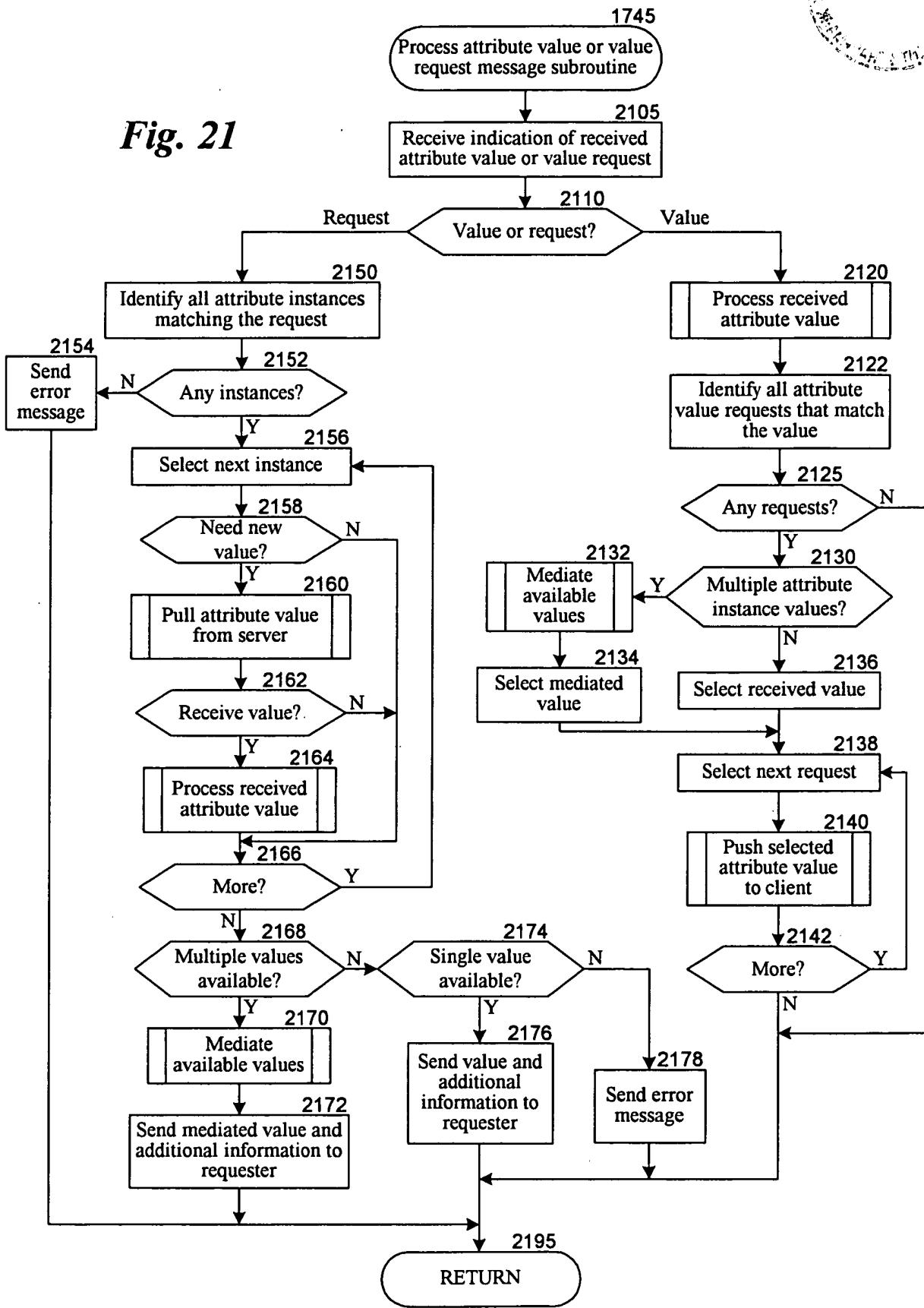
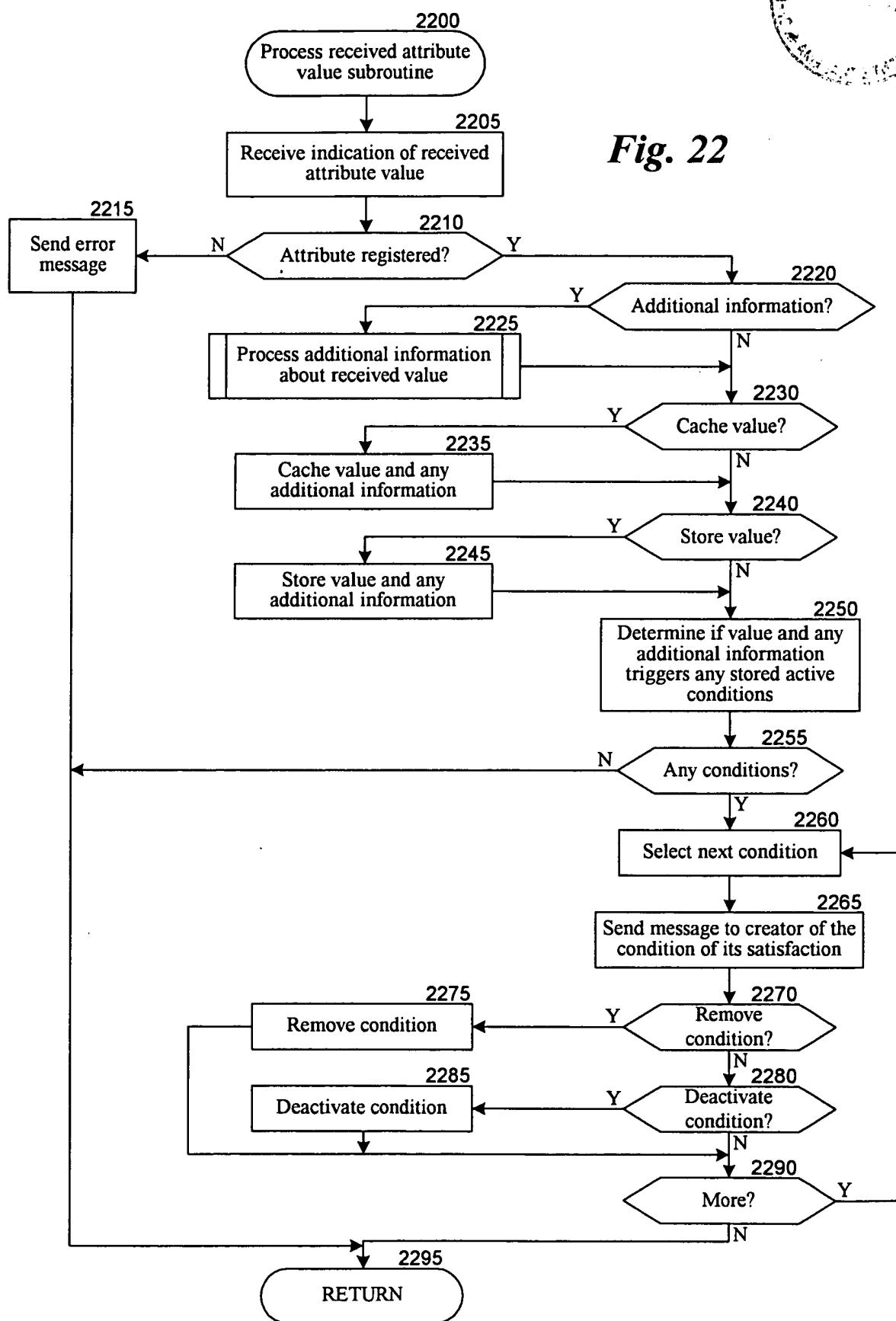


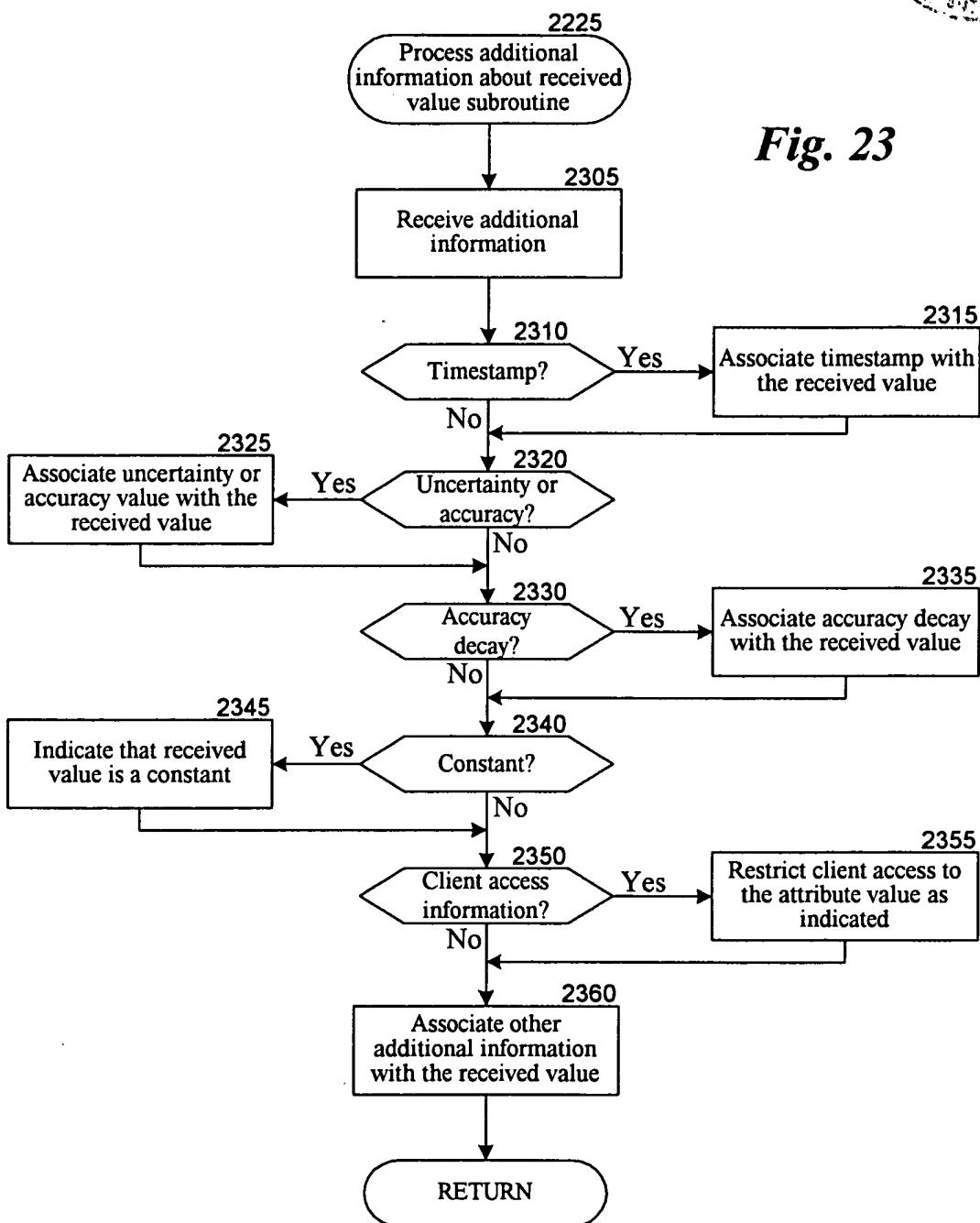
Fig. 22



TOP SECRET - SECURITY INFORMATION



Fig. 23



00000000000000000000000000000000



Fig. 24

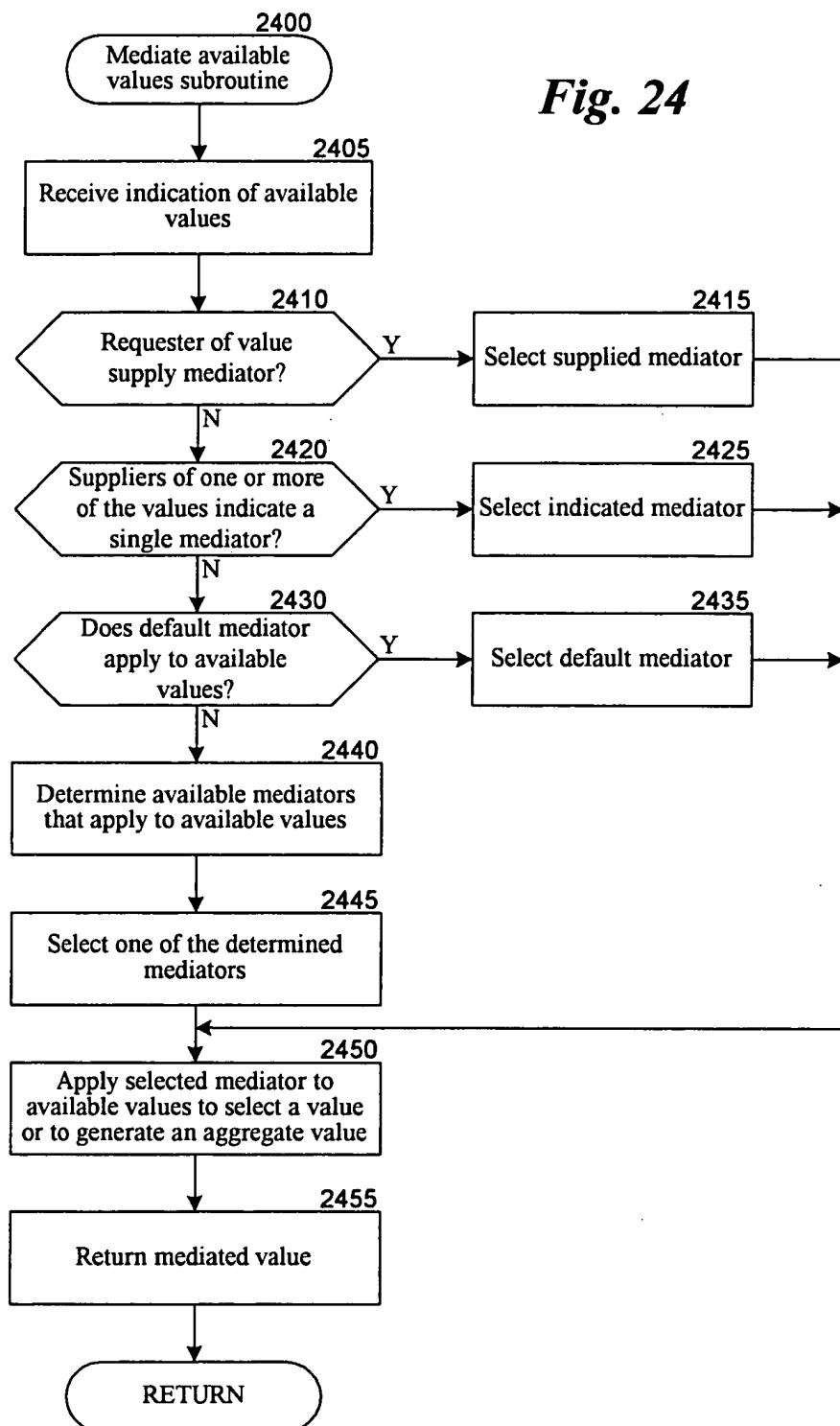
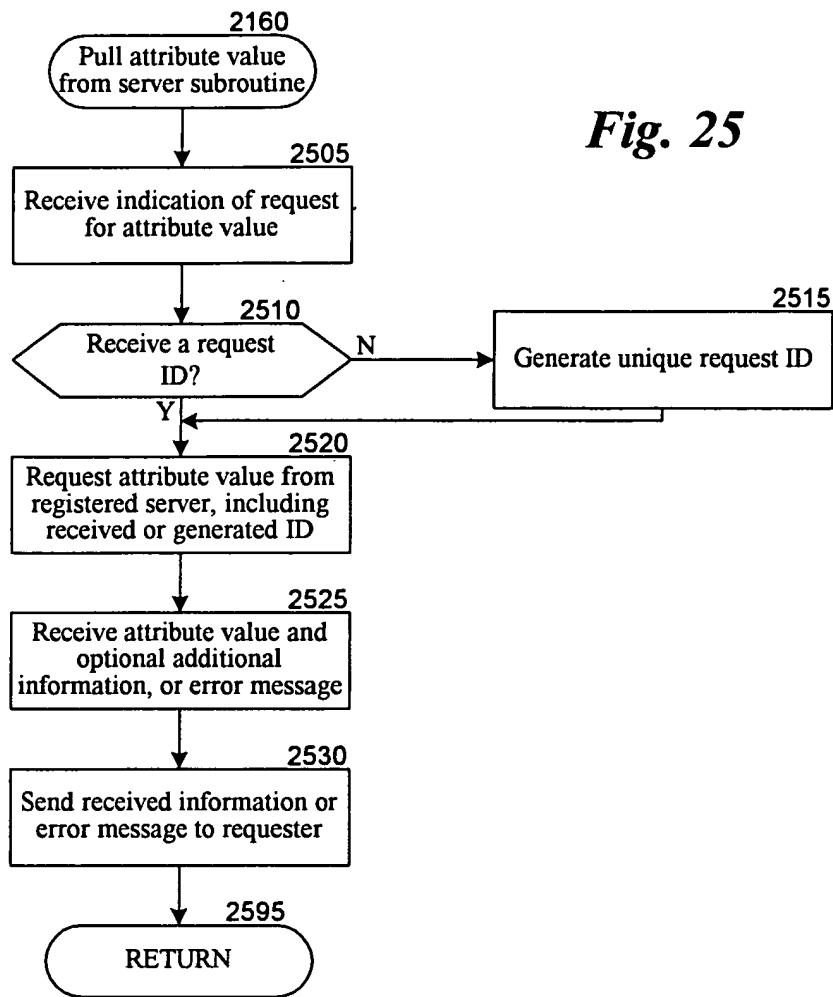




Fig. 25



TOP SECRET//COMINT



Fig. 26

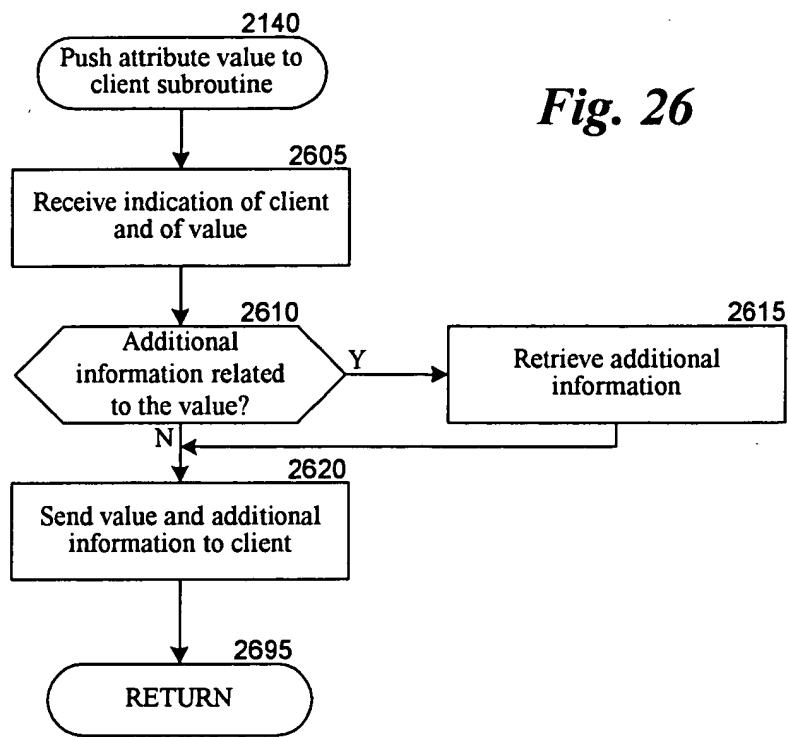




Fig. 27

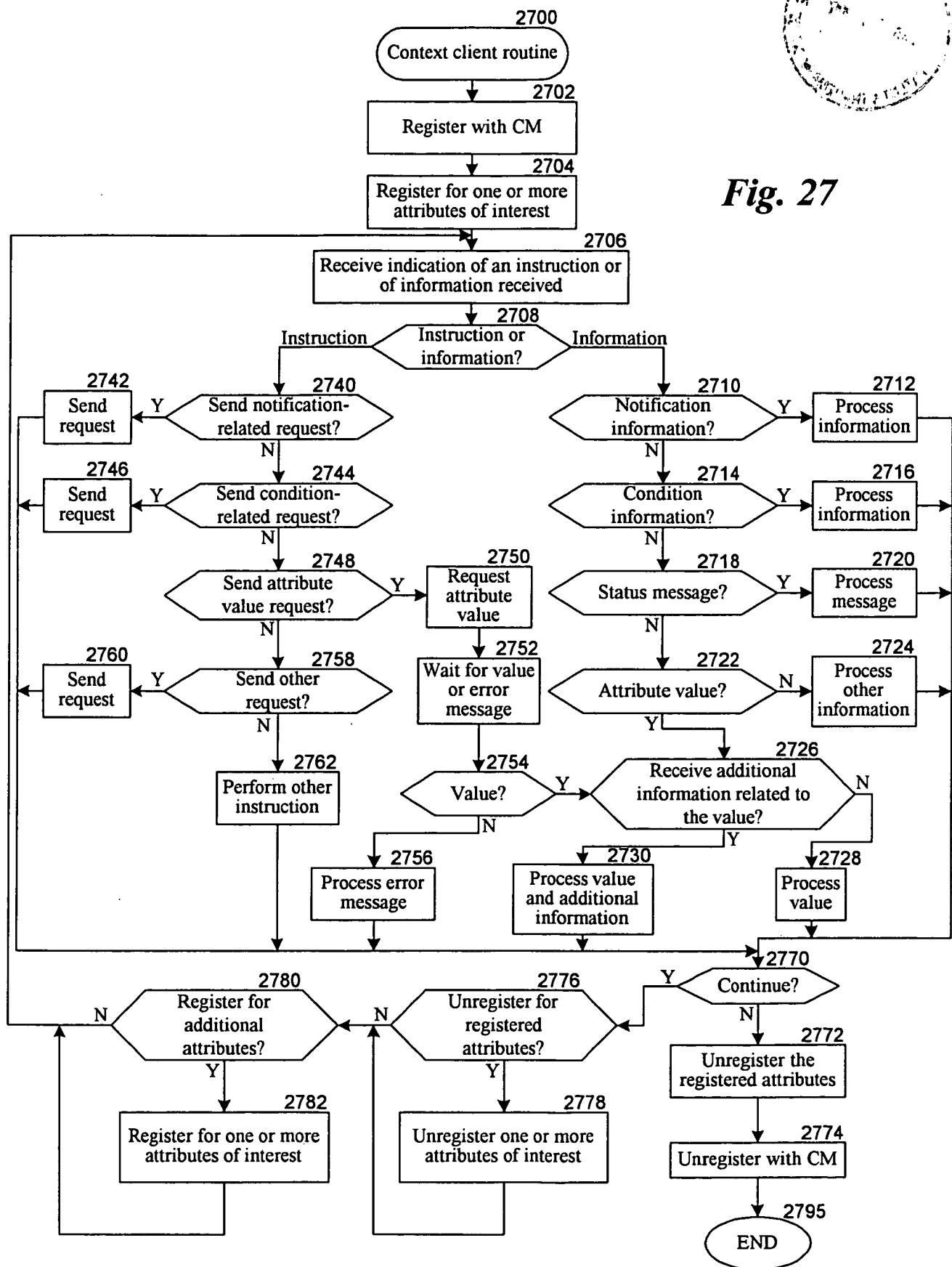


Fig. 28

